Lab Report : 8

Problem no.- 1: Write a java program to Create an interface named Department with attributes "deptName" and "head" including abstract methods for printing these attributes. Abstract methods: printDeptName(), printDeptHead() .
Then, Create a class named Office with attributes officeName, 'officeLocation', and 'numberOfEmployees and include methods such as getOfficeName(), getOfficeLocation(), getNumberOfEmployees(), displayOfficeDetails() .
Lastly, create a class named Employee extending Office and implementing the Department interface. This class should include attributes like 'employeeId, 'employeeName', 'position' and include methods like:- getEmployeeId(), getEmployeeName(), getPosition(), display EmployeeDetails() .
Now, write the complete java program.

Code :

```java
import java.util.Scanner;

interface Department {
 void printDeptName();
 void printDeptHead();
}

class Office {
 private String officeName;
 private String officeLocation;
 private int numberOfEmployees;

 public Office(String officeName, String officeLocation, int
numberOfEmployees) {
     this.officeName = officeName;
     this.officeLocation = officeLocation;
     this.numberOfEmployees = numberOfEmployees;
 }

 public String getOfficeName() {
     return officeName;
 }
```

```java
    public String getOfficeLocation() {
        return officeLocation;
    }

    public int getNumberOfEmployees() {
        return numberOfEmployees;
    }

    public void displayOfficeDetails() {
        System.out.println("Office Name: " + officeName);
        System.out.println("Office Location: " + officeLocation);
        System.out.println("Number of Employees: " +
numberOfEmployees);
    }
}

class Employee extends Office implements Department {
 private int employeeId;
 private String employeeName;
 private String position;

 public Employee(String officeName, String officeLocation, int
numberOfEmployees, int employeeId, String employeeName, String
position) {
        super(officeName, officeLocation, numberOfEmployees);
        this.employeeId = employeeId;
        this.employeeName = employeeName;
        this.position = position;
    }

    public int getEmployeeId() {
        return employeeId;
    }

    public String getEmployeeName() {
        return employeeName;
    }

    public String getPosition() {
        return position;
    }

    public void displayEmployeeDetails() {
        System.out.println("Employee ID: " + employeeId);
        System.out.println("Employee Name: " + employeeName);
        System.out.println("Position: " + position);
```

```java
    }
    @Override
    public void printDeptName() {
        System.out.println("Department: Software Engineering");
    }
    @Override
    public void printDeptHead() {
        System.out.println("Department Head: MD. Khan");
    }
}
public class Problem {
public static void main(String [] args){

    Employee obj = new Employee("ABCD", "Bangladesh", 100, 16,
"Afia Islam", "Manager");

    System.out.println("Department Details:");
    obj.printDeptName();
    obj.printDeptHead();

    System.out.println("\nOffice Details:");
    obj.displayOfficeDetails();

    System.out.println("\nEmployee Details:");
    obj.displayEmployeeDetails();

    }
}
```
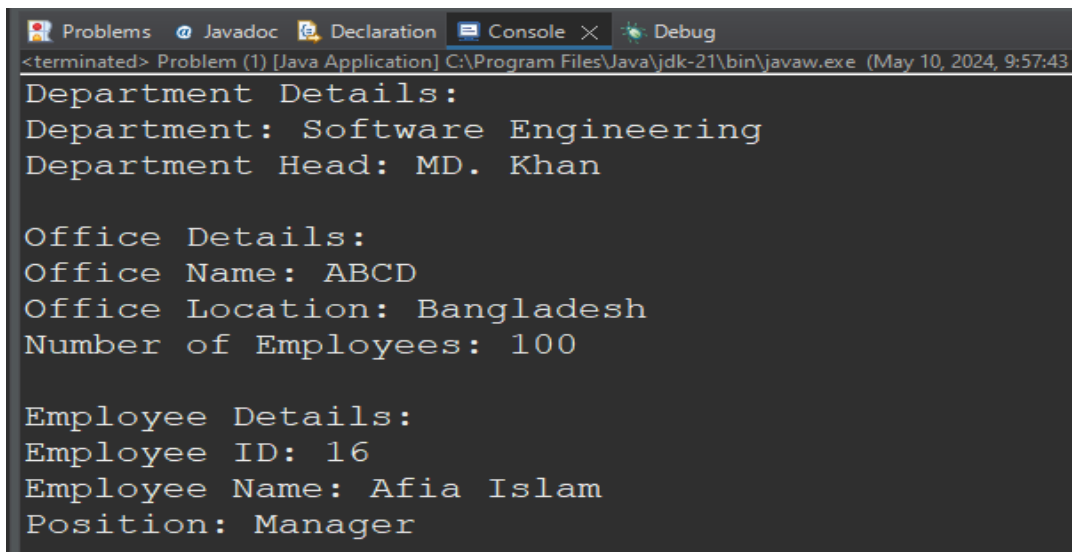
Output :